

June 2003

Overview

Rehabilitation of Aging Dams

Dams Dot the Landscape

More than 50 years ago, the U.S. Department of Agriculture was first authorized by Congress to help local communities with flood control and watershed protection.

Local communities have constructed more than 11,000 flood control dams in 47 states since 1948 through the following water resource programs:

- Watershed Program (PL-534 Flood Control Act of 1944 and PL-566 Watershed Protection and Flood Prevention Act),
- Pilot Watershed Program (1952-1954), and
- Resource Conservation and Development Program.

Many of the flood control dams resemble large farm ponds. They are part of a full complement of land and water conservation practices on private lands aimed at the basic conservation principle of holding the raindrop high in the watershed as close to where it strikes the land as possible.

These watershed dams are part of our Nation's aging infrastructure that includes highways, bridges, and storm sewers. Local watershed projects represent a \$15 billion investment in the national infrastructure. Local projects are federally assisted, not federally owned projects. Local sponsors own the dams and are responsible for their operation and maintenance.

Today, there is growing national concern that many of the early flood control dams that are at or near the end of their 50-year design life pose a public safety issue.

Benefits of Watershed Projects:

Watershed projects provide flood control, municipal and irrigation water supply, recreation, soil erosion control, water quality improvement, wetland development, and wildlife habitat enhancement on more than 130 million acres across the country. Annually the Watershed Program yields benefits of more than \$1.6 billion.

Time Takes Its Toll

The majority of the dams were planned and designed with a 50-year life span. Many of these dams are approaching the end of their designed life; in 2003, 170 already are beyond the end, 1100 will reach their end within the next 5 years, and more than 3000 will be there within the next 10 years.

As dams get older, deterioration increases and construction costs rise. Some common problems of older dams are:

- Deteriorating metal pipes and structural components—after 50 years, metal rusts and fails.
- Sediment-filled reservoirs—sediment displaces storage of floodwaters. Some sediment may have contaminants from chemicals in runoff from upstream areas.
- Subdivisions and businesses built upstream—roofs and concrete streets and sidewalks increase the volume of runoff to the dam.

Public Safety Concerns

If a dam should fail, it would pose a serious threat to the health and safety of those living downstream and to the communities that depend on the reservoir for drinking water. A dam failure could create adverse environmental impacts in the same downstream floodplains that it has been protecting for years. When severe storms, heavy rains, or snow melt occur, the dam is often the only barrier between the rising water level and homes, property, and farmland.

Today, many dams are in a far different setting than when they originally were constructed. Most were built in rural areas to protect agricultural land downstream. Over the years, population growth and urban sprawl have occurred both upstream and downstream from the dams. Many dams do not meet current dam safety requirements. Many of these dams are unknown to most of the residents who are protected by them. Some are quietly deteriorating as time takes its toll on their components. Unless something is done to rehabilitate or, in some cases, remove them, they pose a public safety issue.

Rehabilitation Assistance

In 2000, the Watershed Protection and Flood Prevention Act (PL-566) was amended to provide NRCS authorization to assist communities with rehabilitation of their aging dams. The legislation authorizes NRCS to work with local communities and watershed project sponsors to address public health and safety concerns and potential environmental impacts of aging dams. NRCS provides technical and financial assistance in planning, designing, and implementing watershed rehabilitation projects or removal of dams.

Rehabilitation projects may be cost shared between the federal government and local sponsors. NRCS may provide 65 percent of the total cost of the rehabilitation project. Local sponsors can provide the remaining 35 percent in cash or through “in kind” costs for the value of land rights, project administration, and other planning and implementation costs associated with the project. Federal funds cannot be used for operation and maintenance activities.

Local watershed project sponsors must submit an application—available from the local NRCS office—to request assistance in rehabilitating their dam.

Opportunities to Address Other Natural Resource Needs

In addition to addressing human health and safety issues, rehabilitation provides opportunities for communities to provide new benefits, such as adding municipal and irrigation water supplies, recreation, and wetland and wildlife enhancements.

Where flood control can be achieved by other measures, dams may even be removed and the site restored to natural conditions to the extent possible.

Technical Advances

Today, technology advances, design and construction experience, and updating of design criteria have improved the safety of dams. Design methods are much more sophisticated than when early dams were designed and built.

What Can You Do?

Contact your local conservation district, NRCS office, or state dam safety agency about watershed dams in your community that may need rehabilitation. Find out who the local watershed project sponsors are and volunteer to help increase public awareness of the importance of flood control dams in your community. Participate in public meetings about potential rehabilitation projects in your area.

Project sponsors can identify additional resource needs that could be addressed in a potential rehabilitation project. They can identify high priority rehabilitation needs, determine the availability of land rights, and assure that operation and maintenance is current for all their dams.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.